TITLE OF INVENTION: THIN-FILM TRANSISTOR AND METHOD OF FABRICATING SAME

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

### NOTICE OF ALLOWANCE AND FEE(S) DUE

53080 7590 10/02/2008 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, NW WASHINGTON, DC 20005-3096 EXAMINER

PHAM, HOAI V

ART UNIT PAPER NUMBER

2802

DATE MAILED: 10/02/2008

 APPELCATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKSET NO.
 CONFREMATION NO.

 10/578.887
 05/11/2006
 Takayuki Takeuchi
 06/1352-0130
 5026

 APPLY TYPE
 SMALL ENTITY
 ISSUE FEE DUE
 PUBLICATION FEE DUE
 PREV. PAID ISSUE FEE
 TOTAL FEES) DUE
 DATE DUE

 nonprovisional
 NO
 \$1510
 \$300
 \$0
 \$1810
 01/02/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT, PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above

B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

# Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

appropriate. All further indicated unless corrects maintenance fee notifica	correspondence includir ed below or directed oth	or transmitting the ISS ig the Patent, advance of herwise in Block 1, by (	orders and notification of n (a) specifying a new corres	naintenance fees will pondence address; a	II be mailed to the curren and/or (b) indicating a sep	snould be completed where t correspondence address as sarate "FEE ADDRESS" for	
CURRENT CORRESPOND	ENCE ADDRESS (Note: Use Bi	iock 1 for any change of address)	Note Fee( pape have	Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.			
600 13TH STRE	T WILL & EMER	72008 YY LLP		Conti	ficate of Mailing or Tran		
						(Depositor's name)	
						(Signature)	
						(Date)	
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/578,887 TITLE OF INVENTION	05/11/2006 THIN-FILM TRANSI	STOR AND METHOD	Takayuki Takeuchi OF FABRICATING SAME	:	061352-0130	5026	
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE TOTAL FEE(S) DUI	E DATE DUE	
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/02/2009	
EXAM	IINER	ART UNIT	CLASS-SUBCLASS				
PHAM,	HOAI V	2892	257-040000	•			
"Fee Address" ind PTO/SB/47; Rev 03-0 Number is required.  3. ASSIGNEE NAME A PLEASE NOTE: Unl recordation as set fort	ondence address (or Cha 3/122) attached. ication (or "Fee Address 12 or more recent) attach ND RESIDENCE DATZ less an assignce is ident h in 37 CFR 3.II. Comp	inge of Correspondence  "Indication form and. Use of a Customer A TO BE PRINTED ON		3 registered patent vely, e firm (having as a regent) and the names meys or agents. If no printed.	nember a 2s of up to be name is 3	document has been filed for	
(A) NAME OF ASSI		categories (will not be p	(B) RESIDENCE: (CITY			roup entity 🗖 Government	
4a. The following fee(s) are submitted:    Itsue Fee   Publication Fee (No small entity discount permitted)   Advance Order - # of Copies			A. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)   A check is enclosed.   Payment by credit card. Form PTO-2038 is attached.   The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overspayment, to Deposit Account Number (enclose an extra copy of this form).				
- 11	s SMALL ENTITY state	as. See 37 CFR 1.27.			LENTITY status. See 37 C		
NOTE: The Issue Fee an interest as shown by the	d Publication Fee (if req records of the United Sta	uired) will not be accepte tes Patent and Trademan	ed from anyone other than t k Office.	he applicant; a regist	ered attorney or agent; or	the assignee or other party in	
Authorized Signature			Date				
Typed or printed name			Registration No.				
This collection of inform an application. Confiden submitting the complete this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	nation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this but 'irginia 22313-1450. DC k13-1450.	CFR 1.311. The informati U.S.C. 122 and 37 CFR USPTO. Time will var rden, should be sent to the ONOT SEND FEES OR	ion is required to obtain or re 1.14. This collection is est y depending upon the indivi- he Chief Information Office COMPLETED FORMS TO	etain a benefit by the imated to take 12 mi idual case. Any con r, U.S. Patent and T D THIS ADDRESS.	e public which is to file (an inutes to complete, includi nments on the amount of t rademark Office, U.S. De, SEND TO: Commissioner	nd by the USPTO to process) ing gathering, preparing, and ime you require to complete partment of Commerce, P.O. for Patents, P.O. Box 1450,	

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# UNITED STATES PATENT AND TRADEMARK OFFICE

#### UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

DATE MAILED: 10/02/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,887	05/11/2006	Takayuki Takeuchi	061352-0130 5026	
53080	7590 10/02/2008		EXAM	IINER
MCDERMOTT WILL & EMERY LLP			PHAM, HOAI V	
600 13TH STREE		ART UNIT	PAPER NUMBER	
WASHINGTON, DC 20005-3096			2892	

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 384 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 384 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

#### Application No. Applicant(s) 10/578.887 TAKEUCHI ET AL. Notice of Allowability Examiner Art Unit Hoai v. Pham 2892 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. This communication is responsive to 08/29/2008. 2. The allowed claim(s) is/are 1-9 and 17-19. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) 🔯 All b) Some\* c) None of the:

1. A Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

Copies of the certified copies of the priority documents I International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:	nave been received in this national stage application from the						
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this co noted below. Failure to timely comply will result in ABANDONMENT of the THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.							
<ol> <li>A SUBSTITUTE OATH OR DECLARATION must be submitted. Not INFORMAL PATENT APPLICATION (PTO-152) which gives reason</li> </ol>							
5. CORRECTED DRAWINGS ( as "replacement sheets") must be subr	nitted.						
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached							
1) hereto or 2) to Paper No./Mail Date							
(b) I including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date							
Identifying indicia such as the application number (see 37 CFR 1.84(c)) she each sheet. Replacement sheet(s) should be labeled as such in the header							
<ol> <li>DEPOSIT OF and/or INFORMATION about the deposit of BIG attached Examiner's comment regarding REQUIREMENT FOR THE</li> </ol>							
Attachment(s)							
1. Notice of References Cited (PTO-892)	5. ☐ Notice of Informal Patent Application						
2. Notice of Draftperson's Patent Drawing Review (PTO-948)	6. Interview Summary (PTO-413), Paper No./Mail Date						
<ol> <li>Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 5/11/2006</li> </ol>	7. X Examiner's Amendment/Comment						
Examiner's Comment Regarding Requirement for Deposit of Biological Material	8. X Examiner's Statement of Reasons for Allowance						
or biological material	9. Other						

/Hoai v Pham/

Primary Examiner, Art Unit 2892

Application/Control Number: 10/578,887 Page 2

Art Unit: 2892

### DETAILED ACTION

#### Election/Restrictions

 Applicant's election of claims 1-9 and 17-19 in the reply filed on 08/29/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### Examiner's amendment

- 2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
- This application is in condition for allowance except for the presence of claims
   10-16 non-elected without traverse. Accordingly, claims 10-16 have been cancelled.
- The application has been amended as follows:

# In the claims:

Cancel claims 10-16

## Allowable Subject Matter

- Claims 1-9 and 17-19 are allowed.
- The following is an examiner's statement of reasons for allowance: the prior of record fails to disclose the combination of a thin film transistor recited in the base claim

Application/Control Number: 10/578,887

Art Unit: 2892

1, including the combination of the structure comprising: the  $\pi$ - conjugated organic semiconductor molecules are oriented so that  $\pi$ -orbitals thereof substantially oppose each other and that a molecular axis of main chains thereof is oriented to be oblique with respect to a direction of electric field in a channel formed in the semiconductor layer.

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai v. Pham whose telephone number is 571-272-1715. The examiner can normally be reached on M-F.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao Xuan Le can be reached on 571-272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
- 9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoai v Pham/ Primary Examiner, Art Unit 2892